In re Appln. of Heuft et al. Application No. 10/527,732 Response to Office Action of October 27, 2006

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Claim 1 (currently amended): An apparatus for distributing a random stream of items into several lanes which are adapted to transport the items individually one after the other, the apparatus comprising:

a transport device which has at least one driven conveyor belt, and a pair of side rails, displaced from one another and bordering the conveyor belt, the transport device transporting the stream of items in a direction of transport;

a lane divider <u>assembly</u> including at least one <u>two</u> movable <u>lane dividers</u> divider adapted to divide the stream of transported items; and a device for driving the lane divider <u>assembly</u> such that the at least one <u>two</u> movable <u>lane</u> dividers move divider moves back and forth simultaneously in <u>and against</u> the direction of transport and transversely to it, <u>such that when moving back and forth in and against the direction of transport</u>, the two movable lane dividers maintain a position substantially parallel with respect to each other and substantially aligned with respect to the direction of transport.

Claim 2 (currently amended): The apparatus according to claim 1, wherein the at least one two movable dividers divider is one are two of several movable dividers which include includes a middle divider projecting against the direction of transport and side dividers set back staggered with respect to the middle divider.

Claims 3-4 (canceled)

Claim 5 (currently amended): The apparatus according to of claim 1, wherein a part of at least one of the side rails is divided and a part of the rail is adapted to be moved move outwards.

Claims 6-8 (canceled)

Claim 9 (new): The apparatus of claim 5, further comprising:

In re Appln. of Heuft et al. Application No. 10/527,732 Response to Office Action of October 27, 2006

a sensor for detecting blockages, wherein upon detecting a blockage, the sensor sends a control signal to carry out an opening and closing movement of the movable part of at least one of the side rails.

Claim 10 (new): An apparatus for distributing a random stream of items into several lanes which are adapted to transport the items individually one after the other, the apparatus comprising:

a transport device which has at least one driven conveyor belt, and a pair of side rails, displaced from one another and bordering the conveyor belt, the transport device transporting the stream of items in a direction of transport;

a lane divider including at least one movable divider adapted to divide the stream of transported items; and

a device for driving the lane divider such that the at least one movable divider moves back and forth simultaneously in the direction of transport and transversely to it,

wherein the distance between the side rails increases incrementally in the direction of transport, the increase commencing at a point in front of a front edge of a frontmost divider, and

wherein a distance from the front edge to the point corresponds approximately to a dimension of one of the items.

Claim 11 (new): The apparatus of claim 10, wherein the incremental increases are rounded in a grooved manner.

Claim 12 (new): The apparatus of claim 10, wherein the front edge is formed in the shape of a tip.

Claim 13 (new): The apparatus of claim 10, wherein the dimension is a diameter of a cylindrical item.

Claim 14 (new): An apparatus for distributing a random stream of items into several lanes, the apparatus comprising:

a conveyor belt transporting the stream of items in a downstream direction;

In re Appln. of Heuft et al. Application No. 10/527,732 Response to Office Action of October 27, 2006

a pair of side rails displaced from one another, each side rail bordering a side of the conveyor belt parallel to the direction of transport;

a beam above the conveyor belt in a position parallel to the conveyor belt, the beam rotating about a fulcrum and being displaced in and against the direction of transport;

a lane divider assembly suspended from the beam, the lane divider assembly including a frame and at least one lane divider fixed to the frame; and

a driver driving the beam transversely across the direction of transport and in and against the direction of transport such that when the beam moves in and against the direction of transport, the frame moves longitudinally with respect to the conveyor belt.

Claim 15 (new): The apparatus of claim 14, wherein the at least one lane divider is one of several lane dividers which includes a middle divider projecting against the direction of transport and side dividers set back staggered with respect to the middle divider.

Claim 16 (new): The apparatus of claim 14, wherein a part of at least one side rail is adapted to move outwards.

Claim 17 (new): The apparatus of claim 14, wherein the driver is a cam gear which includes a cam disk selected from the group consisting of a star wheel and a disk with a grooved track, wherein the cam disk is driven by a motor.

Claim 18 (new): A method for dividing a random stream of items into several lanes, the method comprising:

transporting the items in a downstream direction toward at least one lane divider via at least one conveyor belt;

guiding the items on the conveyor belt using a pair of side rails, one side rail on each side of the conveyor belt, the side rails being parallel to the direction of transport;

ordering the items into a hexagonal arrangement by narrowing the distance between the side rails;

incrementally increasing the distance between the side rails as the items approach the at least one lane divider; and

In re Appln. of Heufi et al. Application No. 10/527,732 Response to Office Action of October 27, 2006

transporting the items past the at least one lane divider thereby dividing the items into at least two lanes.

Claim 19 (new): The method of claim 18, further comprising:

moving the lane divider in an upstream, downstream and transverse direction across the stream of items.

Claim 20 (new): The method of claim 18, further comprising: moving a part of at least one side rail outward and inward.